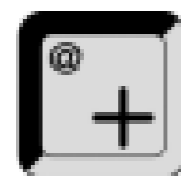


NEWSLETTER

ISSUE NO 1 JANUARY 2005



Maths &
Computing

The Bishop's Stortford High School welcomes the opportunity to join the world-class network of innovative, high performing specialist secondary schools that work in partnership with business and the wider community

Partnerships with other schools

Our subject specialisms drive forward the growth of learning opportunities for partner schools and those in the wider community. Our expertise in Mathematics and ICT are beginning to be shared with our partners. This month two members of the Mathematics Department are delivering booster sessions for Year 6 pupils in our partner Primary Schools. Our team of IT technicians are providing the equivalent of two hours support to each of our Primary partner Schools encompassing support on: existing hardware, software issues-student, academic and administration, computing problems and Virus troubleshooting. The team will eventually be able to extend provision to provide a service whereby they build new computers, install network cabling and wireless networks at highly competitive rates.

Opening of Turing Suite

One of the first advantages of gaining specialist status has been the provision of The Turing Suite, the new large computer facility that has been made available this term. The suite consists of 60 computers. It can be used by two classes at the same time and there is usually room for 6th Form students to carry out private study work.

The room has been kitted out by i-desk. These desks are interlocking

and have the computers located within their framework. This means there are no trailing wires or computers in the way of students working. The computers have modern flat screens so take up a lot less room than the old style monitors

The room was opened by Sir Mike Tomlinson, the former Chief Ofsted Inspector in November.

The room is in use by classes all week. The Tur-

ing Suite is now open at lunchtimes from 1.15 until 2.00 for students. The room will be manned each lunch-time according to the following rota:

Monday: Mrs Lusby
Tuesday: Mr Atkinson
Wednesday: Mr Holttum
Thursday: Mrs Traynier
Friday: Mr Read

The Turing Suite is available for local businesses to hire. For more details contact Mrs Susan Smith at the School.

Maths Lecture

This year's Lecture was presented by Professor Chris Budd of the University of Bath on the uses of Quadratic Equations. We were delighted to welcome students and teachers from across the consortium:

Hockerill, Herts and Essex High School and Bishop's Stortford College responding to our invitations. We learned how quadratic equations were first used to calculate taxes and we took in orbits of comets, winning

the Rugby World Cup and avoiding hazards while driving. We look forward to next year's event when David Acheson from Jesus College, Oxford will be talking on chaos and the Indian rope trick!



The NRICH mathematics project

The NRICH mathematics project, based in Cambridge was founded in 1996 and is part of the Millennium Mathematics Project. Its key aims are to *“raise the standards of achievement in school mathematics, to promote the mathematical development of children who have the potential to go on to study mathematical subjects at university, and to support the special educational needs of exceptionally able children.”*

Through their website (www.nrich.maths.org.uk) NRICH provide a diverse catalogue resources that

The Bishop’s Stortford High School Mathematics Department are able to use to deepen the understanding of their classes. Students are stretched, puzzled and motivated by the problems that cover the entire curriculum and plenty more besides.

Material from NRICH is regularly used as part of maths lessons, particularly in KS3 and 4. It may be included to provide stimulating mental starters that pose open ended and thought-provoking questions. Alternatively, a problem could form the

basis for the main activity within a lesson or for an entire investigation.

NRICH problems allow our students to engage fully with a mathematical idea. Instead of answering straight-forward, text-book style questions, they have to discover for themselves not only the solution, but how to get to it and why it works. It is no wonder that NRICH mathematics is on display in classrooms and is becoming embedded into the traditional scheme of work.

Manage Family Finance with Maths

In partnership with Hertford Regional College and Next Step we will be delivering ‘free’ classes in finances and maths/ numeracy in March. We have circulated details of

taster sessions to our parents and those of our partner primary schools.

- Classes are small and friendly
- All ages and abilities are welcome

You can get a Nationally recognised qualification in Numeracy

For more details contact Mrs Susan Smith at the School.

The COMPTIA A+ course

This is the first step on the IT certification ladder. Split into two parts, the first covering Hardware and the second operating systems. The course covers PC hardware assembly, the roles

of each component within the PC, and diagnostics. The second part covers Windows NT, 2000 and XP as well as DOS and Windows 98. (40 sessions)

The course will be offered as an evening session and is open to the community. For more details about fees and timings please contact Mrs Susan Smith at the School.



SAMS online learning

Dear Parent

Online Learning at
www.samlearning.com

I am pleased to inform you that all TBSHS pupils are now registered for SAM Learning, an online learning service that can be used at home or at school. SAM Learning usually costs home users £99.99 per year, but TBSHS pupils now have full use of this service totally free of charge.

The SAM Learning web site contains a wide range of reference materials and revision activities directly related to the Key Stage 3 SATs,

GCSE and A level examinations. Also included are many hours of examination type question papers.

Learners need three details to login:

School ID CM23 BS4
User ID Date of birth followed by two initials; first name then last name.

Example: 010885DJ is the User ID for David Jones born 1st Aug 1985.

Password Initially same as User ID, you should change your password as soon as you login.

Learner accounts were set up for all of our pupils

during the last academic year. For these pupils, passwords have not changed. Forgotten passwords can be retrieved through the web site or by seeing me at school.

Whilst the school encourages pupils to take advantage of the wide range of materials available to support them with their learning and revision, the use of the web site at home remains at your discretion.

Please do not hesitate to contact me at school if you have any questions.

M Atkinson
ICT Department

Maths Club

The Maths Club is held once a week after school. Its aim is to cover extra curricular Maths topics and to help fast track gifted and talented pupils with the ultimate goal of taking their GCSE a year early. This has already happened successfully with a group of six boys (4 of whom achieved A*s by the end of Year 10) who are currently studying Further Maths in Year 12.

A new intake started last year and continue to attend in strong numbers in Year 8. The following topics are being covered:

The History of Numbers

Logic Puzzles
Powers and Logarithms (A level)
Code breaking and Encryption
Matrices (A level)
Probability (Odds of winning the National Lottery)

Most of these have been general interest topics and have been great fun to touch upon as they mostly fall outside of the normal syllabus. This current intake are about to start more 'conventional' CSE work and we should have an even greater number of boys ready to sit their exam in a couple of years.

COMPTIA A+

The school has started running additional courses in line with our specialist bid provision. This year we have introduced the A+ course. The course is run in 3 phases: A+ hardware, A+ software and A+ networking. These qualifications are recognised and valued in the computer industry.

The first phase was open to members of the school and ran in twilight sessions. The first exam was taken on Tuesday 4th January. It was taken by teachers, technicians and about 20 A Level students. Everybody passed!

ICT within Mathematics

September 2004 saw a large increase in the availability of ICT resources within the Mathematics department at TBSHS. Most noticeably the number of interactive whiteboards increased from two to four, and 30 laptops became available for the students' use within the department. The challenge during the Autumn term has been to get all of the new hardware working reliably and for staff to explore its many uses.

The Mathematics Department had begun using the interactive whiteboards in the 2003/2004 academic year, but not every teacher had the opportunity to use one. This year the department has leapt forward with every member of staff having their own laptop and being timetabled with at least one teaching group

in a classroom containing an interactive whiteboard. The work that staff put into developing and cataloguing resources last year is now being disseminated across the department, and ICT has now been integrated into the schemes of work.

The new whiteboards are a fantastic resource that both the students and staff are responding positively to (in a recent survey 95% of mathematics students at TBSHS thought that the interactive whiteboards were a positive addition to the classroom). Some key improvements are:

- *whiteboard resources can be prepared in advance, saved, used again and shared*
- *mental starters can come alive with the use of purchased software and the internet*
- *graphs can be displayed*

accurately and plotted quickly

- *diagrams in general can be displayed more accurately*
- *theories of co-ordinate geometry and graphs can be explored by changing variables and examining the effects*

The purchase of student laptops means that the students now have the opportunity to use their ICT skills to explore mathematics in ways that have never been possible before. This term the laptops are being used daily whereas over past years teachers have struggled to find spare computer rooms.

Graphing and co-ordinate geometry software available on the laptops mean that students can explore theories for themselves and see in real-time what happens when they change variables. For ex-

ample, several graphs can be plotted in a matter of seconds to see what happens when the gradient is changed. This means that more time can be spent discussing the results and extending students' thinking beyond the straightforward problems. When they ask the often awkward "What if..." questions, the outcome can be plotted immediately, thus answering the question and checking the hypothesis.

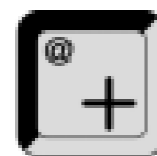
There is still a long way to go with developing, acquiring and cataloguing resources within the department (and even beyond to the whole school), but the new resources have given us a good start on this exciting journey.



Content Level: 4 Challenge Level

Mike and Monisha meet at the race track, which is 400m round. Just to make a point, Mike runs anticlockwise whilst Monisha runs clockwise, normally Mike can complete a circuit of the track in two thirds of the time Monisha takes.

They agree to stop when they both meet at the start again. Where will they meet on their way around and will they ever meet at the start again? If so, after how many circuits?



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THE TURING SUITE

Are you an individual looking to broaden your skills?

Are you an employer looking for courses which will help your employees?

We can help you!

The Spring Menu

AN EXCEL TASTER

Excel is a very powerful utility that is found in all offices. Most people use Excel from time to time with very little idea of quite how powerful this tool is. This short course will open the door to some of the things that Excel can be used to achieve. Fully hands-on, this course will leave the delegates stunned by what can be achieved when Excel is used to its fullest.

AN INTRODUCTION TO OUTLOOK

Outlook is used by everyone everyday, but most people use a tiny percentage of the capabilities of this amazing application. This short course will demonstrate what Outlook can do, and how much time it can save in the average office environment. Outlook is the most powerful application in the Office suite when used to its optimum.

THE INTERNET

A vast reserve of information that can save time and effort. Unfortunately, many companies do not use this information store to its best. The Internet gives unlimited access to images, lists and reference materials that can be invaluable. Save money using free services online that cost money to use in other media. This short course will give a guided tour of the search engines, short cuts and helpful tips for getting the best from this almost unlimited resource.

For more details contact Mrs Susan Smith at the School.

